BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, DC 20554

In the Matter of	
Expanding Flexible Use of the 3.7 to 4.2 GHz Band	GN Docket No. 18-122
Petition for Rulemaking to Amend and Modernize Parts 25 and 101 of the Commission's Rules To Authorize and Facilitate the Deployment of Licensed Point-to-Multipoint Fixed Wireless Broadband Service in the 3.7-4.2 GHz Band	RM-11791
Fixed Wireless Communications Coalition, Inc., Request for Modified Coordination Procedures in Band Shared Between the Fixed Service and the Fixed Satellite Service	RM-11778

REPLY COMMENTS OF THE SMALL SATELLITE OPERATORS (ABS GLOBAL LTD., HISPASAT S.A. AND CLARO S.A.)

Scott Blake Harris
V. Shiva Goel
Jason Neal
Harris, Wiltshire & Grannis LLP
1919 M Street NW
Washington, DC 20036
(202) 730-1330

Counsel to the Small Satellite Operators

July 18, 2019

TABLE OF CONTENTS

INTRODUCTION AND EXECUTIVE SUMMARY

In their opening comments, ABS Global Ltd., Hispasat S.A., and Claro S.A. (the "SSOs" or "Small Satellite Operators") explained that space station authorizations imparted by an FCC license or grant of U.S. market access provide satellite operators with the right to interference protection against the Flexible Use Service ("FUS") everywhere in the country, whether or not an earth station has been registered to coordinate operations with the Fixed Service ("FS").[1] These rights expose fatal deficiencies in the competing proposals currently being advanced by the C-Band Alliance ("CBA") and T-Mobile. Thus, the SSOs urged the Commission to pursue alternatives that would treat all licensed satellite operators fairly, incentivize earth station operators ("ESOs") to clear the band quickly, and provide taxpayers with a fair share of reallocation proceeds. The SSOs believe any lawful proposal should meet these requirements, whether it proceeds by a private auction or FCC-held auction.

I. The record strongly supports each pillar of the equitable approach advocated by the SSOs. Nearly every commenter to address the issue agrees that space station operators have enforceable rights to protection from impermissible interference from the FUS. While Verizon half-heartedly suggests that earth station registrations provide the sole source of interference protection, it badly misinterprets the Commission's rules—and fails to consider that earth station registrations coordinate operations with the FS, and not the FUS (an entirely different and non-conforming service).[2] T-Mobile continues to claim that although satellite licensees have enforceable rights, those rights somehow will not be affected by harmful interference from the

---

1 *See* Comments of the Small Satellite Operators, GN Docket No. 18-122 (filed July 3, 2019) ("SSO PN Comments").

2 *See* Comments of Verizon, GN Docket No. 18-122 (filed July 3, 2019) ("Verizon PN Comments").

FUS.[3] But this argument fundamentally miscomprehends the nature of the space-to-Earth communications authorized by a C-band satellite license: a space-to-Earth communications link is impossible if terrestrial operations prevent successful reception.

II. Notwithstanding widespread recognition that satellite operators should be made whole for their loss of spectrum,[4] the CBA continues to insist that the SSOs' spectrum rights be confiscated without compensation. With no serious legal support for its position, however, the CBA dusts off its tired argument that the SSOs are somehow engaged in impermissible "rent-seeking." Yet nearly every "fact" that the CBA trots out about the SSOs' satellites is either wrong or misleading. While the SSOs may not have generated 2017 C-band revenues from customers in the continental United States (CONUS), they currently use their FCC authorizations to transmit to CONUS earth stations in the 3.7-4.2 GHz band and continue to pursue opportunities to expand that business in the future. The CBA also understates the coverage of SSO satellites, ignores the basic economics that threaten serious, long-term injury to the SSOs from a reallocation, flips the timetable of ABS's New York earth station application, and even gets the ownership of ABS-3A wrong. Of course, none of these facts are relevant to whether the SSOs have enforceable rights that would be impaired by the introduction of FUS into the band—they do—but the CBA's distortions are so astonishing they are worthy of note.

As interestingly, the CBA fails to disclose that much of its fleet shares the supposed "deficiencies" they attribute to the SSOs. For example, the CBA claims that the SSOs ought to be excluded from this proceeding because their satellites did not generate 2017 revenue in the

---

[3] Comments of T-Mobile USA, Inc., GN Docket No. 18-122 (filed July 3, 2019) ("T-Mobile PN Comments").

[4] *See, e.g.*, Comments of the Competitive Carriers Association, GN Docket No. 18-122 (filed July 3, 2019) ("CCA PN Comments").

spectrum to be reallocated. *Yet more than 60 percent of the CBA satellites at issue in this proceeding do not generate U.S. C-band traffic (and presumably do not generate U.S. C-band revenue)* according to an unrebutted analysis in the record.[5] The CBA also suggests that several SSOs should be excluded because, although their satellites cover key U.S. markets, those satellites do not cover the entire CONUS. Yet about a third of the CBA's affected satellites do not cover the entire CONUS. The CBA even attacks the SSOs for using ITU filing administrations other than the United States. Not only does the FCC's *DISCO II* framework make this point irrelevant, but about a quarter of the CBA members' satellites are filed with foreign licensing administrations. *All told, more than 75 percent of the satellites that the CBA included in its economic justification for receiving billions of dollars in compensation*[6] *fail to meet the criteria the CBA is trying to use to deny the SSOs any compensation whatsoever*.

The CBA also attempts to argue that the SSOs have no interference protection rights, but its legal arguments are less than flimsy. Without any support or analysis, the CBA suggests that interference protection only exists at locations where there is a satellite operator actively engaged in "service transmission."[7] This requirement, of course, appears nowhere in Part 25. And none of the CBA's other attempts to spin out this argument—as a speculative licensing concern, or as a standing issue, or as an appeal to the public interest—fare any better. Worse, the new standard would destabilize spectrum licensing in virtually every frequency band, harming licensees and consumers and discouraging wireless investment at a critical time. At bottom, the CBA's

---

5 *See* Letter from Colby May, Counsel to Trinity Broadcasting, to Marlene H. Dortch, Secretary, FCC, at 4, GN Docket No. 18-122 (filed May 16, 2019) ("Trinity May 16, 2019 Letter").

6 Dr. Coleman Bazelon, "Maximizing the Value of the C-Band," attached to Joint Comments of Intel Corp., Intelsat License LLC, and SES Americom, GN Docket No. 18-122 (filed Oct. 29, 2018) ("CBA Bazelon Paper").

7 Comments of the C-Band Alliance at 3-4, 21-23, GN Docket No. 18-122 (filed July 3, 2019) ("CBA PN Comments").

exclusionary criteria are arbitrary and unsupported, and should be rejected by the Commission. They are an expression of greed, not analysis.

III. Finally, the Commission can move this proceeding forward without getting bogged down by some of the legal disputes raised in the opening comments. In particular, the Commission (1) can incentivize ESOs, and (2) must reject T-Mobile's incentive auction, regardless of whether ESOs qualify as "licensees" under the Communications Act. Whether or not ESOs are "licensees," they are users of spectrum whose cooperation is essential to transitioning the reallocated portion of the band to 5G—and that is enough to warrant an incentive payment. Moreover, whether or not ESOs are "licensees," they certainly are not the *only* licensees in the band, and they certainly are not "competing licensees" with respect to satellite operators. For these and other reasons, the Commission cannot adopt T-Mobile's incentive auction.

I. The Record Reflects Widespread Agreement that Space Station Operators Have Enforceable Rights to Protection from Impermissible Interference.

In the *Public Notice*, the Commission asked "to what extent . . . the enforceable rights of a space station operator" are "dependent on, or derivative from, the rights of licensed or registered receive-only earth stations that receive that space operator's signal."[8] This is one point on which nearly every commenter appears to agree: space station operators' rights derive from the authorizations they receive from the Commission, not from the optional registration process their customers may or may not use to coordinate with the FS.

Section 25.102 of the Commission's rules, which governs authorizations for space station operators to transmit in the band, resolves this issue.[9] Other features of the Commission's authority and rules confirm the point. For example, the Commission's authority to grant space station licenses arises from its core duty to regulate *transmission.*[10] And space stations, not earth stations, are typically held responsible for the operations of the satellite network.[11]

Support for the basic proposition that space station operators receive enforceable rights from their FCC authorizations, and not from ESOs, runs across the comments filed in response to the *Public Notice*. The Satellite Industry Association ("SIA") explained that "it is plain that space station operators have independent rights to transmit free from interference, and that such rights are not derived from earth stations."[12] The CBA likewise agrees that C-band licensees or

---

[8] *International Bureau and Wireless Telecommunications Bureau Seek Focused Additional Comment in 3.7-4.2 GHz Band Proceeding*, Public Notice, DA 19-385, GN Docket 18-122, at 3 (Int'l Bur. & Wireless Telecomm. Bur. rel. May 3, 2019) ("*Public Notice*").

[9] SSO PN Comments at 1-3. *See* 47 C.F.R. § 25.102.

[10] *See*, *e.g.*, Comments of the Satellite Industry Association at 3, GN Docket No. 18-122 (filed July 3, 2019) ("SIA PN Comments"); CBA PN Comments at 5.

[11] *See*, *e.g.*, SIA PN Comments at 7-8.

[12] SIA PN Comments at 12.

market access holders "possess non-interference rights against other transmitters" that "exist independent of earth stations."[13] But it is not just the satellite industry. The Competitive Carriers Association agrees that all space station operators with authorizations to operate in the C-band have "rights that are entitled to due process and statutory protections."[14] ACA Connects similarly recognized that licensees receive "protection from harmful interference."[15] Google agrees as well, explaining that "[t]he Commission's rules," and Section 25.102 in particular, "reflect that the enforceable rights of an individual space station operator are (1) the right to transmit, and (2) the right to successfully connect to the individual earth stations that the FCC authorizes under applicable FCC rules."[16] Others who advocate for increasing shared access in the band are in accord.[17] Even commenters that argue that ESOs have their own independent rights to interference protection do not contend that space station operators' rights derive from those of the ESOs.[18]

Importantly, those enforceable rights do not arise from the process by which ESOs register and coordinate with existing FS users, nor are they defined by that registration and coordination process. Instead, they "apply at all locations throughout the United States, and not

---

13 CBA PN Comments at 10.

14 CCA PN Comments at 32-33.

15 Comments of ACA Connects – America's Communications Association at 6, GN Docket No. 18-122 (filed July 3, 2019) ("ACA PN Comments").

16 Comments of Google LLC on Interference Protection Rights at 5, GN Docket No. 18-122 (filed July 3, 2019) ("Google PN Comments").

17 *See* Comments of Dynamic Spectrum Alliance at 18, GN Docket 18-122 (filed July 3, 2019) ("DSA PN Comments"); Comments of the Open Technology Institute at New America at 5, 18, 21-22, GN Docket No. 18-122 (filed July 3, 2019) ("OTI PN Comments").

18 *See*, *e.g.*, ACA PN Comments at 6; Comments of National Public Radio, Inc. at 3-5, GN Docket No. 18-122 (filed July 3, 2019) ("NPR PN Comments"); Comments of BYU Broadcasting at 5-6, 8, GN Docket No. 18-122 (filed July 3, 2019) ("BYU PN Comments"); Supplemental Comments of PSSI Global at 2-3, GN Docket No. 18-122 (filed July 5, 2019) ("PSSI PN Comments").

just where an earth station is sited" currently.[19] Coordination of earth stations with FS sites is an intuitive and reasonable response to the reality that FSS operators and FS operators could potentially interfere with one another, and as co-primary users, one would not otherwise have a clear priority over the other should interference concerns arise. That, no doubt, is why the Commission's rules require earth stations to "register[] with the Commission in order to protect them *from interference from terrestrial microwave stations*" that co-equally share the band,[20] not from any and all users, like the FUS, or pirate radio stations, for that matter. Indeed, space station operators' clear entitlement to protection from interference from FUS is at the root of why this proceeding is needed.

Only one commenter, Verizon, appears to endorse the extreme position that space station operators have "no independent right . . . in the C-Band to assert interference protection for their transmit frequencies" and that "[o]nly earth station operators may hold interference protection rights."[21] In support of that argument, Verizon asserts that "Section 25.102(b) provides that *earth stations* generally are entitled to interference protection" from co-equal users of the band, but space station operators are not, nor are unregistered earth stations.[22] But Verizon fundamentally misreads Section 25.102(b), which clearly states that "[p]rotection from impermissible levels of interference" accompanies "*the authorizations* granted under [Part 25]"—the same authorizations that are granted to space station operators, as both the SSOs and Google have explained.[23] Section 25.102(b) mentions "interference to the reception of signals

---

19 SSO PN Comments at 3.

20 47 C.F.R. § 25.131(b) (emphasis added).

21 Verizon PN Comments at 12-13.

22 *Id.* at 12.

23 47 C.F.R. § 25.102(b). *See* SSO PN Comments at 2; Google PN Comments at 5.

by earth stations" not to limit interference protection to earth station licensees alone, but to recognize that space stations' authorized transmissions are only subject to interference from "terrestrial stations in a co-equally shared band" at the receiving end of the space-to-Earth link.[24] Interference with space station operators' transmit rights will naturally be felt at the end-point intended to *receive* those transmissions—and *that* is the reason for Section 25.102(b).[25]

Moreover, Verizon completely fails to consider the rights of space station operators to protection from interference by *non-co-primary users* like the FUS. While Verizon is right that "coordinat[ing] with terrestrial [FS] stations" and "obtain[ing] registrations" is necessary to manage the potential conflicts among FSS and FS operators,[26] it makes no sense to conclude that space station operators have no enforceable interference rights themselves with respect to non-conforming prospective spectrum users.[27]

Because space station operators hold these enforceable rights regardless of ESOs' coordination decisions, or even the particulars of which ESOs operate at any given time or place, the Commission simply cannot clear the band without properly and lawfully addressing the rights of space station operators. This also raises one of the several fundamental failings with T-Mobile's current proposal: Even if ESOs give up in an auction whatever rights they may have in

---

24 47 C.F.R. § 25.102(b).

25 *See* SSO PN Comments at 6-7; SIA PN Comments at 12-13.

26 Verizon PN Comments at 13.

27 *See* SSO PN Comments at 3-5. The Wireless Internet Service Providers Association's ("WISPA") comments use broad language in a heading—*i.e.*, that "the scope of protection from harmful interference is limited to registration and coordination"—but the text of those comments makes clear at several points that WISPA is addressing only "the scope of interference protection *provided to receive-only satellite earth stations*," not the broader rights of space station operators. Comments of the Wireless Internet Service Providers Association at 6, GN Docket No. 18-122 (filed July 3, 2019) ("WISPA PN Comments") (emphasis added and capitalization altered); *see also id.* at 8 ("[T]he scope of interference protection *for receive-only earth station facilities* is limited by registration, and then by the terms of coordination with [FS] licensees.").

the C-band, space station operators will continue to have enforceable rights to interference protection that would be irretrievably undermined by the introduction of FUS into the band.

T-Mobile's supposed quick fixes to the problem do not work. First, T-Mobile suggests that the Commission can engage in the wholesale elimination of satellite operators' spectrum use rights pursuant to a Section 316 license modification.[28] Yet numerous parties on various sides of this proceeding agree that Section 316 does not permit the Commission to effect such a fundamental change to the terms of existing authorizations.[29] T-Mobile also asks the Commission to pretend that it will "not be required to exercise its authority under Section 316 with respect to authorizations held by satellite operators," because FUS operations will only "cause harmful interference" to successful reception—and "harmful interference" to the successful reception of an authorized party's transmitted signal somehow does not qualify as "harmful interference" with that party's transmission rights.[30] This argument does not pass the laugh test because the right to transmit communications from space-to-Earth necessarily includes the right to be received at the end of the space-to-Earth link.[31] There is undoubtedly a way for the Commission to transition a significant portion of the C-band to flexible use in a manner that respects the rights of all authorized space station operators and the interests of other stakeholders, but T-Mobile's proposal is not it.

---

28 T-Mobile PN Comments at n.11.

29 *See* SSO PN Comments at 27-30; DSA PN Comments at 17-18; CCA PN Comments at 22-24; SIA PN Comments at 10-11; BYU PN Comments at 8-9; PSSI PN Comments at 3-5.

30 T-Mobile PN Comments at 3-5.

31 *See*, *e.g.*, SSO PN Comments; 47 C.F.R. § 25.102(b).

II. The CBA's Effort to Single Out the SSOs Is Irretrievably Flawed.

In its continued effort to hoard the proceeds from a reallocation, the CBA dusts off its tired argument that the SSOs are somehow engaging in "rent-seeking" by requesting compensation for their loss of spectrum.[32] But the CBA gets even the most basic facts about the SSOs wrong—while keeping quiet about the characteristics of its own members' fleets. The CBA's threadbare legal analysis for excluding the SSOs likewise is baseless, and finds no support in statute, regulation, or precedent. The Commission therefore must reject the CBA's proposal to deny the SSOs compensation for their loss of spectrum rights.

A. The CBA gets its facts wrong about the SSO fleet—and ignores that CBA satellites are similarly situated.

Much of the CBA's self-defeating argument rests on a desperate attempt to disparage the value of SSOs' investment in the U.S. market. But the CBA's account of the SSOs' businesses does not hold up to factual scrutiny, and, even where the CBA's descriptions may be accurate, it fails to appreciate that its own members' satellites are similarly situated.

1. The CBA's concocted narrative about the SSOs is simply false.

The CBA suggests that the SSOs will never put their FCC authorizations to work for U.S. consumers because the SSOs did not have U.S. customers as of 2017.[33] This is nonsense. Several SSO satellites *already* transmit to earth stations located in the United States in the 3.7-4.2 GHz band, allowing their customers to provide valuable programming to U.S. consumers. Some of this service comes from overseas clients, while some of it comes from U.S.-client

[32] CBA PN Comments at 22.

[33] *Id.* at 25.

activity. Either way, this traffic further demonstrates that the CBA's use of 2017 revenues as an eligibility requirement makes zero sense.[34]

Importantly, the SSOs' effort to expand beyond existing service levels remains ongoing, although it has been—for obvious reasons—significantly impaired by the current regulatory uncertainty. To give a few specific examples, the SSOs continue to pursue specific C-band opportunities that include: (a) backhauling religious and entertainment content for distribution to U.S. viewers; (b) providing emergency communications in the United States in the wake of natural disasters; (c) providing video backhaul of U.S. content for fiber-based distribution overseas; and (d) facilitating the expansion of internet connectivity to remote areas overseas for a U.S. company. In addition, several SSOs already have sold capacity on their affected satellites in other frequency bands—making their commitment to expanding U.S. services crystal clear. Indeed, existing Ku-/Ka-band customers of the SSOs already have expressed significant interest in C-band service because of capacity constraints affecting Ku-band operations. At least one SSO continues to pursue opportunities to serve U.S. government customers using its multicontinental footprint.

The SSOs' ongoing competitive efforts and successes to date should surprise no one, because the affected satellites were designed to serve the United States, which is why the SSOs applied to add them to the Permitted List. As the CBA says, "actions speak louder than words."[35] There is simply no reason why the SSOs would have equipped their respective satellites to have a substantial U.S. C-band footprint—and invested the hundreds of millions of dollars required to design, manufacture, license, and launch them into space—other than to

---

[34] *See* SSO PN Comments at 10-13.

[35] CBA PN Comments at 25.

execute on their long-term vision of expanding services and choice for U.S. consumers and U.S. companies. Notably, the SSOs' U.S. C-band satellites were not originally launched to other orbital locations and only later repositioned to serve the U.S. market. The same cannot be said of many CBA satellites. The bottom line is that the SSO satellites were purpose-built to provide C-band service into the Americas from the slots in which they orbit today, and thus establish the U.S. footprint necessary for the SSOs to become global players in the satellite market.

2. The CBA gets its basic facts wrong.

Not only is the CBA's fundamental narrative about the SSOs entirely incorrect, so too are many of the details that comprise the fiction. For example, the CBA suggests, oddly, that ABS-3A cannot serve the U.S. market because it only covers the United States at 5.4-degree elevation.[36] As an initial matter, while ABS applied to operate an earth station in New York that would communicate with ABS-3A at 5.4 degrees elevation, ABS-3A has extensive coverage across a number of extremely valuable urban U.S. markets where it can communicate at higher look angles—including with existing teleports operated by third parties. Moreover, contrary to the CBA's contention, the provision of service at 5.4 degrees *absolutely* is possible. Just ask Intelsat, which (1) operates a ground facility in Napa, California that communicates with Intelsat 8 (now Intelsat 19) at an elevation angle of approximately 5.2 degrees and with Intelsat 2 (now Intelsat 805) at an elevation angle of approximately 7.9 degrees,[37] and (2) likewise carried traffic between an earth station in Andover, Maine and Intelsat's satellite at 1˚ W.L. at very low elevation angles. Indeed, the Commission's rules straightforwardly permit elevation angles as

---

[36] *Id.* at 23-24.

[37] *See* Intelsat, Intelsat Teleports, http://www.intelsat.com/global-network/intelsatone/teleports/ (last visited July 17, 2019).

low as 5 degrees in the C-band,[38] while ITU regulations permit operations down to 3 degrees.[39] And although look angles on the low end may complicate the process of coordinating with the FS in some locations, ABS completed a coordination study at its Hudson, NY site confirming that the angle would not cause harmful interference to FS stations.[40]

The CBA also speculates that ABS sought a license for its New York earth station opportunistically, suggesting that the application was filed in response to the release of the Notice of Inquiry that preceded this rulemaking.[41] The CBA is either willfully misleading the Commission or deliberately disregarding its own knowledge of the time required to undertake such an operation. Before a draft of the *NOI* was even circulated, ABS engaged in substantive hearings with its local planning body over a special exception required to construct the earth station.[42] ABS received local planning approval in mid-2017—a decision that took *years* of effort to secure, beginning shortly after ABS-3A's 2015 launch and ending well before anything resembling the CBA proposal was ever put on the record. In any event, the NOI hardly proposed to evict satellite operators to make room for terrestrial mobile services; indeed, it did not propose to do anything at all. To the contrary, the item asked a variety of questions surrounding greater terrestrial use of the C-band, the majority of which focused on how satellite operators might *share* the band with the FUS.[43]

---

38 47 C.F.R. § 25.205(a).

39 ITU R.R. 21.14.

40 Application of ABS Global Ltd., IBFS File No. SES-LIC-20180213-00118 at Attachment CoordRpt (filed Feb. 13, 2018).

41 CBA PN Comments at 23. *See Expanding Flexible Use in Mid-Band Spectrum Between 3.7 and 24 GHz*, Notice of Inquiry, 32 FCC Rcd. 6373 (2017) ("*NOI*").

42 Town of Claverack, Planning Board Minutes (June 5, 2017), http://townofclaverack.com/wp/wp-content/uploads/2017/06/PBminutesJune2017.pdf.

43 *NOI* ¶ 20.

The CBA also misleads with its banal observation that Hispasat filled capacity on Amazonas-3 for an initial period after its launch.[44] What the CBA neglects to mention is that this committed capacity begins to roll off later this year, while Amazonas-3 will remain in service *into the 2030s*—making Hispasat's financial losses both imminent and very long-lasting. The reason why Hispasat initially filled capacity is not difficult to understand. To enter the U.S. market, a satellite operator needs to launch a satellite. To finance the launch of a satellite, a satellite operator needs as high a fill rate as possible on day one. Thus, after building Amazonas-3 for the U.S. market, Hispasat made the only practical decision available to a competitive entrant: sell as much capacity as possible first, even to overseas customers, and follow it up with U.S. sales once the company strengthened its U.S. foothold. None of this changes the fact that Hispasat needs access to the U.S. spectrum for which it is licensed to make good on its long-term, U.S.-focused investment. Indeed, for all three SSOs, the ability to transmit in the United States has been essential even to sell capacity to overseas customers, many of whom desire the flexibility to reach U.S. viewers and U.S. business locations and chose the SSOs because of their multinational footprints. For example, one of Claro's Brazilian clients uses Star One C1 to have popular programming in the United States distributed to hundreds of U.S. points.

Finally, it bears mentioning that factual inaccuracies plague even the most irrelevant CBA attacks. For example, strangely enough, the four foreign companies that comprise the CBA criticize ABS-3A for being "owned by a Hong Kong company."[45] That claim is simply incorrect—ABS is a Bermuda-domiciled company—and demonstrates that the CBA's willingness to muddy the waters with inaccurate information knows few bounds.

---

[44] CBA PN Comments at 23.

[45] *Id.*

3. The CBA's fleet is similarly situated.

The CBA claims that the Commission can eliminate the SSOs' rights because the SSOs are still establishing their U.S. C-band business, and because some SSO satellites do not cover the entire United States.[46] The CBA even suggests that the SSOs are on different footing because they did not use the United States as their ITU filing administration, even though they acknowledge that grants of U.S. market access are the equivalent of a U.S. license.[47]

These supposed reasons for excluding the SSOs have no basis in the Communications Act, the Commission's regulations, precedent, or good spectrum management.[48] But worse for the CBA, the CBA seems to have forgotten that many—indeed, *most*—of its members' U.S. C-band satellites are no different. As explained by Trinity Broadcasting, over 60 percent of CBA-member satellites authorized for C-band use in the United States do not yet "appear to provide service to earth stations in the CONUS," and, of the ones that do, some have C-band transponders that are utterly devoid of any CONUS C-band traffic.[49] Moreover, roughly one-third of affected CBA-member satellites do not cover the entirety of the continental United States,[50] while about a quarter were licensed by foreign administrations.[51] Nevertheless, the

---

46 *E.g.*, *id.* at 24-25.

47 *Id.* at 6-10.

48 *See, e.g.*, SSO PN Comments; Reply Comments of ABS Global Ltd., Hispasat S.A., and Embratel Star One S.A. at 15-17, GN Docket No. 18-122 (filed Dec. 11, 2018); Letter from Scott Harris and Shiva Goel, Counsel to the SSOs, to Marlene H. Dortch, Secretary, FCC, GN Docket No. 18-122 (filed Mar. 25, 2019) ("SSO Mar. 25, 2019 Letter"); Letter from Scott Blake Harris and Shiva Goel, Counsel to the SSOs, to Marlene H. Dortch, Secretary, FCC, GN Docket No. 18-122 (filed Feb. 21, 2019) ("SSO Feb. 21, 2019 Letter").

49 *See* Trinity May 16, 2019 Letter at 4.

50 *See* Intelsat, Fleet Maps, http://www.intelsat.com/fleetmaps/ (last visited July 17, 2019); SES, Our Coverage, https://www.ses.com/our-coverage/satellites (last visited July 17, 2019); Eutelsat, Find Your Satellite, https://www.eutelsat.com/en/satellites/find-your-satellite.html (last visited July 17, 2019); Telesat, Our Fleet, https://www.telesat.com/our-fleet#fleet (last accessed July 17, 2019). Of the 59 CBA-member satellites included in the CBA's October 2018 economic analysis, at least 18 lack full CONUS coverage, many by a very substantial margin.

51 Trinity May 16, 2019 Letter at Addendum Section A, 6-7.

CBA used these satellites in its analysis claiming entitlement to compensation for their loss of spectrum rights.[52] When one combines all affected CBA-member satellites that meet the CBA's made-up criteria for excluding the SSOs—*i.e.*, satellites that (1) do not appear to have had U.S. C-band customers in 2017, (2) do not have full CONUS coverage, and (3) secured rights through ITU filings submitted by a foreign administration—a whopping *76 percent* of the CBA's satellites fail the CBA's own, albeit arbitrary, test.

The SSOs do not question whether CBA-member satellites that lack a robust U.S. C-band business today nevertheless have significant revenue generating potential in the future, or whether CBA-member satellites that do not cover the entirety of CONUS nevertheless cover key and valuable markets in the United States. Nor do the SSOs believe a satellite's filing administration has any relevance to this proceeding so long as its operator obtained U.S. market access in accordance with the Commission's rules. The SSOs' simple point is that the CBA cannot have it both ways. If it believes that prospective losses in licensed spectrum constitute the relevant economic harm, that satellites covering key U.S. markets have enforceable rights, and that grants of U.S. market access provide the same rights as U.S. licenses, then it must allow for compensation to all satellite operators so affected.

B. The CBA's "existing services" requirement is an unwise legal invention.

Most of the CBA's attacks on the SSOs discussed above are entirely untethered from the Communications Act or the Commission's regulations. As CCA explained in its comments, under the Commission's rules, the SSOs hold the same space station authorizations as members of the CBA, and thus are "similarly situated satellite operators" with "essentially the same

[52] CBA Bazelon Paper at 17-19.

rights."[53] None of the CBA's efforts to resist that conclusion hold up to any scrutiny. And if the Commission adopts the CBA's unreasonable position, it will have upended spectrum licensing as we know it in virtually every frequency band.

1. The CBA's service requirement has no legal basis.

First, to the limited extent the CBA attempts to tie its exclusion of the SSOs to the nature of the legal rights the Commission inquired about in the *Public Notice*, the CBA suggests that satellite operators' interference protection rights exist only to the extent that they are currently in use to transmit "service" to an earth station.[54] The CBA does not cite any rule or section of the U.S. Code that sets out that "service" requirement, because there is none. Rather, it arbitrarily inserts the word "service" wherever it can in its comments (ignoring the rules of English as well as those of the Commission) in a clumsy attempt to color the Commission's views.

The attempt must fail. As an initial matter, it confuses the *right* conferred by an FCC authorization with the specific *exercise* of that right to transmit to an individual earth station. The *right* to interference-free transmission arises out of an FCC authorization. Whether that right is currently being exercised in support of transmissions that travel to an earth station today, or provides the ability for a satellite operator to transmit to that location in the future, the right exists and is important to its holder. In either situation, the right would be fundamentally changed by a Section 316 modification that altogether eliminates the possibility of operating in spectrum for which the satellite operator is licensed—and such a modification would therefore be impermissible.[55]

---

[53] CCA PN Comments at 31.

[54] *See id.* at 3, 4, 21-24.

[55] *See, e.g.*, *Community Television v. FCC*, 216 F.3d 1133, 1141 (D.C. Cir. 2000); *Cellco P'ship v. FCC*, 700 F.3d 534, 543 (D.C. Cir. 2012).

Tellingly, the CBA's invented "service" requirement is completely inconsistent with its own (correct) understanding that transmission rights exist "independently" of receiving earth stations.[56] Under the logic of the CBA's SSO exclusion, an earth station must be actively receiving traffic in order for the space station operator to benefit from interference protection at that location. The CBA tries to resist this outcome,[57] but the conclusion is inescapable. No matter how strongly the CBA wishes it were not so, if an earth station is not receiving traffic in a given location, then there are no "service transmissions" that the CBA claims "give rise to an enforceable right."[58] A "service" requirement also contradicts the Commission's recent reallocation precedent—the same precedent that the CBA relies on to support its secondary-market proposal.[59]

Second, the CBA suggests that the Commission should disregard the SSOs' operations as "paper networks" because the SSOs do not have present U.S. customers, to prevent speculative licensing.[60] Again, it does not tie that argument to the Commission's actual rules. And it cannot, as the Commission's rules already address speculative-licensing concerns—and not through the "service" requirement invented by the CBA.

Under the Commission's rules, milestones and related provisions prevent speculative licensing in the satellite services. As SIA explains in its comments, "[i]nstead of" terminating satellite operator rights "for the lack of a licensed or registered receive-only earth station[]," the Commission's rules "'impose specific application and orbital assignment procedures, bonds, and

---

56 CBA PN Comments at 10, 14.

57 *Id.* at 21.

58 *Id.* at 22.

59 *See* SSO PN Comments at 13-16; SSO Feb. 21, 2019 Letter.

60 *Id.* at 24-25.

milestones for construction and operation of a space station, and limits on pending or unbuilt satellite systems to ensure that a license was not obtained for speculative purposes.'"[61] These targeted requirements "ensure that licensees remain committed and able to proceed with timely implementation of licensed space stations, which generally cost several hundred million dollars each to launch and operate."[62] The SSOs have complied with all of these rules, the effectiveness of which is evident here. Indeed, the SSOs did not obtain—and under the rules, could not have obtained—U.S. market access for "paper networks." To the contrary, the SSO satellites at issue in this proceeding are launched and operational, and as discussed above, have already begun to provide service to U.S. destinations.

Third, relying on its made-up "service transmission" requirement, the CBA seems to suggest that the SSOs would lack standing to challenge the Commission's elimination of their right to operate in reallocated C-band spectrum, though it cannot bring itself to say so outright.[63] As discussed above, the "service" requirement on which this argument is based is spurious. But even if it were not, courts have allowed spectrum licensees to challenge Commission decisions to eliminate licenses even prior to the commencement of service.[64] The SSOs have real, enforceable rights in this band, and they would be aggrieved by a Commission order diminishing those rights without reasonable compensation.[65]

---

61 SIA PN Comments at 6-7 (quoting the *Public Notice*). *See also* 47 C.F.R. § 25.161; *id.* Part 25, Subpart B.

62 *Comprehensive Review of Licensing & Operating Rules for Satellite Servs.*, 28 FCC Rcd. 12,403, 12,418 (2013).

63 *See* CBA PN Comments at 24-25.

64 *See FiberTower v. FCC*, 782 F.3d 692, 695 (D.C. Cir. 2015) (allowing a licensee to challenge the termination of hundreds of licenses with no "actual construction or operation in the licensed area during the license term"). Of course, unlike FiberTower, the SSOs have built, launch, and currently operate their satellites.

65 *Cf.* 5 U.S.C. § 702.

Fourth, the CBA tries half-heartedly to tie its self-serving exclusion of the SSOs to the public interest.[66] But the public interest does not support adopting the CBA's arbitrary standards simply to allow it to hoard more of the proceeds from a reallocation of the spectrum. Just because the SSOs are in the position of competitive entrants, and thus do not have the market share enabled by decades of incumbency, does not mean that their grants of market access should be taken away. To the contrary, the SSOs have undertaken more risk by launching satellites to serve the U.S. market without a large preexisting customer base, which is the precise type of unsubsidized facilities-based investment that the Commission's pro-competitive policies seek to encourage. Moreover, the SSOs will have had much less of an opportunity to recoup their initial investments than CBA members, making their exclusion that much more perverse. As explained previously, the SSO fleet has been in orbit for less time, will remain in orbit for more time, and does not include redundant capacity from an oversupply of improvidently launched FSS space stations.[67] The public benefits from stable, reasonable rules that are even-handedly applied—not unpredictable and unreasonable decisions that deter investment in spectrum-based U.S. markets.

2. Adopting the CBA's service requirement would upend the FCC's approach to spectrum licensing.

The reverberations of adopting the CBA's contrived "service" requirement would reach far beyond this proceeding and upend the stability of the Commission's spectrum licensing policies. Under the CBA's logic, every wireless licensee would have to operate knowing that the Commission might eliminate its spectrum use rights in every area and on every channel where customer traffic has not yet developed even if the licensee is in full compliance with the Commission's construction rules, and even if the continued availability of that spectrum remains

---

66 *See* CBA PN Comments at 25-27.

67 *See* SSO PN Comments at 13.

critical to the licensee's commercial objectives. That would be incredibly disruptive to reasonable investment-backed expectations and would dramatically distort market incentives. Perhaps for that reason, the broader satellite industry evidently disagreed with the "service" requirement proposed by the CBA. In comments filed on behalf of all of members except for AT&T, SIA took pains to explain that, although satellite transmission rights include the right for earth stations to "properly receive a communication," they in no way "originate with earth stations."[68] Not once did SIA tie the enforceability of satellite operator rights to the provision of service to an existing earth station, as the CBA attempted to do to for its own purposes.

III. The Commission Can Lawfully Incentivize ESOs Without Endorsing Legally Flawed Arguments by T-Mobile and Others.

Parties continue to clash regarding whether and how the Commission should ensure that ESOs receive fair compensation, continue to deliver important content to their customers, and—most critical to the Commission's 5G goals—transition completely, successfully, and quickly from whatever portion of the C-band the Commission clears in this proceeding. The CBA continues to argue that the Commission cannot use *any* mechanism "to incentivize receive-only earth stations to clear" the band and must instead rely on the CBA's questionable promise to "protect their customers."[69] T-Mobile asserts that the Commission can rig a reverse auction so that ESOs will undercut space station operators and win the bids for pennies on the dollar—a result seemingly designed to benefit T-Mobile through a massive subsidy.[70] And a number of

---

[68] SIA PN Comments at 13.

[69] CBA PN Comments at 33, 36 (capitalization altered); *see* SSO PN Comments at 17 n.68 (collecting some of the filings questioning the CBA's promise).

[70] T-Mobile PN Comments at 5-10.

other filers take various positions on whether or not ESOs qualify as "licensees" under the Commission's rules.[71] What a mess.

The fundamental policy questions relating to ESOs, however, are much simpler than the record lets on. The truth is that as a basic matter of fairness and common sense, the Commission should ensure that ESOs receive substantial incentives to speed up the transition to 5G. But the Commission cannot adopt T-Mobile's incentive auction, which would require ESOs and satellite operators to bid against each other. In order to conclude that it can provide ESOs compensation, and in order to reject T-Mobile's incentive auction as a mechanism for providing that compensation, the Commission need not entertain the legally dubious argument that ESOs are on the same footing as space station operators,[72] or even wade into the morass of the various parties' positions on that narrow point.

First, clearing *ESOs* would not clear *the band* of all incumbent FSS operators with interference-protection rights.[73] Even if all current ESOs in a particular area—or even the entire country—gave up their registrations, and even if those registrations qualifies as "licenses," space station operators will still retain their rights to transmit in the band with protection from harmful interference from FUS.[74] Those rights of satellite operators are not limited to existing earth stations, nor to their current customers. Thus, to clear the band of incumbent FSS licensees, the

---

[71] *Compare*, *e.g.*, DSA PN Comments at 12-14 (registered ESOs do not hold licenses and cannot receive incentive payments through Section 309(j)(8)), *and* OTI PN Comments at 17-21 (same), *with*, *e.g.*, NPR PN Comments at 5-6 (registered ESOs are licensees that can receive incentive payments through Section 309(j)(8), though "Section 309 itself does not directly address how registered earth stations should be treated in such a procedure"), *and* ACA PN Comments at 4-12 (registered ESOs are licensees, and the Commission should require space station operators to split the proceeds of a reverse auction with them based on a formula agreed by the industries or set by the Commission).

[72] *See*, *e.g.*, CBA PN Comments at 30-33.

[73] *E.g.*, SSO PN Comments at 23.

[74] *See*, *e.g.*, *id.* at 7.

Commission cannot adopt T-Mobile's plan, which asks the Commission simply to pretends that space station operators' rights do not exist.

Second, the primary reason the Commission appears to have inquired about the nature of ESOs' rights is to evaluate T-Mobile's suggestion that the ESOs can participate in a reverse auction against space station operators.[75] Again, the question whether ESOs possess licenses does not resolve whether the Commission can pursue that option, because, regardless of whether registered ESOs are or are not licensees, they are not *competing* licensees with space station operators. They are customers of space station operators, offering complementary, not competitive, services using spectrum rights that are noncomparable.[76]

T-Mobile argues that the "competing licensees" requirement would be satisfied by the mere fact that "at least two . . . licensees" that "are not commonly controlled" might participate in the reverse auction.[77] Whether these licensees are two satellite operators, or two ESOs, or one of each, or maybe even a group of space station operators and a group of ESOs, matters not to T-Mobile. On T-Mobile's account, they qualify as "competing" licensees simply because they must bid against one another in the auction as designed by T-Mobile. Of course, in *every* case where two licensees are involved in the auction process, the second licensee will bid against the first; bidding against one another is what it means to "participate in [a] reverse auction."[78] As a

---

75 *See Public Notice* at 6-7 & nn.32-33.

76 *See*, *e.g.*, SSO PN Comments at 24; CBA PN Comments at 32; Comments of AT&T at 2 n.3, GN Docket No. 18-122 (filed July 3, 2019).

77 T-Mobile PN Comments at 10-11.

78 47 U.S.C. § 309(j)(8)(G)(ii)(II).

result, under T-Mobile's view, the Commission should simply read the word "competing" out of the statute, contrary to fundamental principles of statutory interpretation.[79]

In an attempt to defend its vacuous interpretation of "competing licensees," T-Mobile plucks out of context language from the Commission's 2014 report and order on the broadcast incentive auction and from the 2018 order in *Spectrum Frontiers*.[80] But neither of those orders can bear the weight that T-Mobile places on them. In the 2014 *BIA Report and Order*, the Commission took pains to note that its analysis regarding the "competing licensees" requirement was "based on the statutory conditions applicable to the broadcast television spectrum incentive auction and, thus, *may not apply to different incentive auctions*."[81] The Commission further specified that it "may apply this requirement *differently in other reverse auctions*, depending on the particular eligibility criteria, auction design, and other circumstances involved in such reverse auctions."[82] T-Mobile simply ignores these important warning signs.

And, as predicted by the Commission, the "circumstances involved" here differ wildly from those in the broadcast incentive auction. As just one example, in that auction, the Commission worried that without a broad conception of "competing licensees," a broadcaster that was alone in its area might not be able to participate. More generally, the Commission wanted a broad conception of "competing licensees" to ensure that "market forces" were able to

---

79 *See*, *e.g.*, *Nielsen v. Preap*, 139 S. Ct. 954, 969 (2019) (discussing the "interpretive canon against surplusage"); *see also*, *e.g.*, Antonin Scalia & Bryan A. Garner, *Reading Law: The Interpretation of Legal Texts* 174 (2012) ("If possible, every word and every provision is to be given effect," and "[n]one should needlessly be given an interpretation that causes it to duplicate another provision or to have no consequence.").

80 *See* T-Mobile PN Comments at 10-11 & nn.34-35 (quoting *Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*, Report and Order, 29 FCC Rcd 6567, ¶¶ 413-15 (2014) ("*BIA Report and Order*"); *Use of Spectrum Bands Above 24 GHz for Mobile Radio Services*, Fourth Report and Order, 33 FCC Rcd 12168, ¶ 9 (2018) ("*2018 Spectrum Frontiers Order*").

81 *BIA Report and Order* at ¶ 414 n.1224 (emphasis added).

82 *Id.* (emphasis added).

"determine the highest and best use of spectrum."[83] Here, space station operators' licenses are not geographically restricted within the United States, so the Commission's sole-participant concern does not apply. Moreover, it is T-Mobile's unprecedented proposal that a transmitter and receiver with wildly different spectrum rights, revenues, levels of investment in the band, and market pressures bid against each other that would distort "market forces" by making the price-discovery function of the reverse auction an impossibility.[84] And neither the 2014 *BIA Report and Order* nor the 2018 *Spectrum Frontiers Order* involved "competing licensees" that in reality occupied completely different roles in the wireless ecosystem.[85] T-Mobile may be willing to distort precedent in furtherance of its self-serving proposal, but the Commission need not go along with it—and the courts surely won't.

Finally, the Commission can and should incentivize and enable ESOs to participate productively in the transition of the band. As the SSOs have consistently argued, the Commission has "ample authority under Sections 303(c), 303(r), and 4(i) of the Communications Act" to ensure fair compensation for ESOs.[86] Other filers, including Charter and PSSI, agree that these provisions of the Communications Act make such payments "within the Commission's authority to approve."[87] Some filers argue that these provisions cannot "provide the authority for a public or private auction that is not consistent with the explicit provisions of Section 309(j)."[88]

---

83 *Id.* ¶ 415.

84 *See* SSO PN Comments at 22-25.

85 *See*, *e.g.*, *BIA Report and Order* at ¶ 413 (participants were "broadcast television licensees"—*i.e.*, station operators).

86 SSO Mar. 25, 2019 Letter at 2.

87 Comments of Charter Communications at 2 & n.37, GN Docket 18-122 (filed July 3, 2019). *See* PSSI PN Comments at 6-7 ("PSSI agrees" with the SSOs that these "statutory authorities . . . would enable [the Commission] to authorize or require payments to licensed or registered receive-only earth stations to induce them to modify or relocate their facilities").

88 OTI PN Comments at 10. *See also* DSA PN Comments at 8 (similar); WISPA PN Comments at 14 n.37 (similar).

The SSOs do not disagree—the mechanism that the Commission chooses must be consistent with the Communications Act. The point, however, is that once the Commission settles on a reasonable, lawful mechanism for repurposing the spectrum consistent with the rights of space station operators—whether it be through a private auction or an FCC-run auction —the Commission has authority to make sure ESOs (and taxpayers) share in the value generated by the 5G transition.

CONCLUSION

The record strongly supports a C-band transition that compensates all licensed satellite operators—and not just the big four—for the loss of spectrum rights that would result from a repurposing of the band for the FUS. Nearly every commenter to address the issue agrees that space station authorizations conferred by a U.S. license or grant of U.S. market access provide enforceable rights to transmit free from impermissible interference that exist independently of earth station registrations. That includes a right against interference from the FUS, and sound spectrum policy requires compensating licensees for relinquishing these rights to make room for a new, incompatible service.

The Commission must reject the CBA's continued effort to exclude the SSOs from compensation. The CBA's manufactured narrative about the SSOs is simply untrue, and its attempt to find any legal grounding for its arguments that the SSOs lack enforceable and compensable rights is a failure. Naked self-enrichment—and not facts or law—are driving the exclusion narrative; indeed, the vast majority of CBA members' own satellites fail to meet the arbitrary criteria that the CBA has purported to apply to shut out the SSOs.

Finally, the Commission need not decide difficult questions concerning the legal status of ESOs. Even if ESOs are not "licensees," the Commission can and should incentivize them to

accelerate the transition to 5G. And even if ESOs are licensees, the Commission must reject T-Mobile's self-serving incentive auction proposal.

Respectfully submitted,

Scott Blake Harris
V. Shiva Goel
Jason Neal
Harris, Wiltshire & Grannis LLP
1919 M Street NW
Washington, DC 20036
(202) 730-1330

Counsel to the Small Satellite Operators

July 18, 2019